

LESSONS LEARNED

CATA

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LESSONS LEARNED NO. 5 LEADERSHIP

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ENCOURAGED!**

PREFACE

"The good officer knows that the good NCO gets the job done. The good NCO knows that the good officer will let him do it."

--Sergeant Major Dan Cragg, The NCO Guide

1. The AirLand Battle leader must be a bold, audacious individual willing to take calculated risks, display initiative, and provide innovative approaches to decision making. Our leaders must be prepared to fight and defeat an enemy that may possess technological parity and numerical superiority. This is the challenge of leadership in the 1980's: defending our country's global interests, and deterring future war under conditions of fiscal and resource constraint.

2. For these reasons, the Lessons Analysis Division of the Center for Army Lessons Learned focused primarily on leadership in this newsletter. These lessons learned are derived largely through the observations of the combat trainers of the NTC Operations Group and an assessment by CATA's NTC Observation Division in conjunction with TRADOC subject matter experts during recent NTC rotations.

3. In its effort to "get the word out" to the rest of the Army, CATA provides these tactics, techniques, and procedures for your use and dissemination. If your unit has identified any combat relevant lessons at the NTC or any other training exercises, share them with the rest of the Army by contacting the Center for Army Lessons Learned, AV 552-2191/2438.

KENT E. HARRISON
Colonel, Armor
Commanding

COMMAND AND CONTROL

Leadership, Teamwork, and Flexibility

(FM 71-2J, Chap 3; FC 71-6)

A unit that recently rotated through the NTC was highly successful. What they lacked in modernized equipment they made up for with strong leadership. A senior observer/controller (O/C) described one of the leaders by saying:

"He is the single best leader I have ever seen. He is a teacher; a role model; an excellent communicator. He is concerned with excellence for the sake of excellence itself. He inculcates high standards in others, and understands that combat arms leaders must touch, talk with, and openly love their soldiers."

"The task force has an aggressive NCO Corps and disciplined soldiers. Everyone knows his job, his subordinate's job, and the job of those on his right and left. Everyone knows the importance of doing his job without being told to do it. The relationship of his job to that of other people has been explained to each soldier."

That's quite an endorsement from an OC who has had the opportunity to see numerous leaders and units train at the NTC.

The task force was structured for success. Several factors influenced their success:

- ◆ Early task organization
- ◆ Ingraining teamwork through repetitious combined arms training
- ◆ Emphasizing basic gunnery techniques
- ◆ Rehearsing
- ◆ Developing and using tactical plays

These factors may help your unit prepare for combat. There is no unique factor which determines the outcome of any battle.

Early Task Organization

The division resourced the task force. Positions, especially command and staff, were stabilized six to nine months prior to the NTC rotation. The unit task organized six months prior to the rotation.

Tank/Infantry Teamwork

"Infantry ruled at night and tanks ruled during the day."

Infantry dismounted at night to unhinge the enemy defenses and point out targets for the tanks. The infantry was also used to acquire targets during the daylight. The skills of the infantry and armor crews were well-honed. Most vehicles had two pairs of binoculars up and looking all the time, resulting in super target acquisition. Observers keyed on their own sectors and did not fixate on the one Soviet vehicle everyone could see. Both tankers and infantrymen understood each other's role and strove to help each other so the total effort could succeed.

Co/Tm Teamwork

Co/Tm commanders also understood each other's role. The quality of situation reports was excellent. Units took ownership of parts of the battle and coordinated with adjacent units to influence the battle. This lateral coordination was universal throughout the task force. Mutual trust and explicit battle responsibilities allowed adjacent commanders to coordinate on each other's company net. This reduced the amount of traffic on the battalion command net during heavy engagement periods.

Each leader was expected to display initiative without risk of punishment. Initiative was coupled with strong teamwork. "Think of what the other leader needs to know. Tell him." This was enforced and practiced. Leaders knew each other well enough to anticipate their moves on the battlefield. An exchange might have gone like this: "I'll suppress -- you maneuver to hit him by the wadi."

Gunnery

Companies constantly boresighted by the manual. They used every opportunity when they stopped movement to recheck their boresight. There was strong emphasis on the technical and practical aspects of MILES gunnery (see NTC Lessons Learned Miles Checklist, Jun 86). Fire commands, target acquisition, and land navigation were practiced during maneuver training. Observations from FORSCOM unit after action reports were used to reinforce the link between leadership and gunnery. One report stated,

"Junior leaders must do their job. Command and control is a two way process, and proactive leadership is essential at all levels. From reestablishment of communication to the proper care, boresighting, and zeroing of all MILES, are leader's responsibilities and must be supervised right down to the individual infantryman."

They treated MILES as a weapon system, not as a training aid, to gain enough proficiency to defeat the OPFOR.

Rehearsals

A reverse planning sequence was used to rehearse actions on the objective first, then to rehearse other battle actions. Leaders conducted rehearsals in the vicinity of the TOC. They positioned themselves on simple terrain models to replicate units in the upcoming operation. Terrain features were depicted using 3 x 5 cards. The task force wargamed possible attack alternatives against the OPFOR regiment. They also integrated the combat support leaders in the wargaming process.

Wargaming integrated supporting fires with the maneuver plan. Each company and separate platoon had specific responsibilities for shooting indirect fires. Execution of the task force fire support plan was everyone's responsibility, not just the company FSOs. For example: "Tm A shoots tgt A0045 as they cross phase line Blue."

The task force also rehearsed while buttoned up and in MOPP IV, and timed the actions. Company commanders backbriefed the task force commander on rehearsal timings. Timings gave the commander an idea of how long it would take to move under actual conditions and facilitated sequencing unit moves.

Communication was key to understanding. Subordinates wargamed each action so no aspect of execution was unclear. Wargaming also reduced communication times on the task force nets. Changes to orders could be quickly passed through the use of short messages.

Plays

The task force developed a few basic plays (two movements to contact, two attacks, and two defenses) and learned to execute them well. The plays evolved over a period of time. Refinement was a collective effort with everyone's ideas shared and discussed.

During professional development classes, task force leadership met and and wargamed the plays and clarified responsibilities. Individual soldiers understood how their tank, TOW, or Dragon fit into the task force plan as a result of combined arms training at homestation. The plays were trained and believed in by everyone in the task force. They were flexible and easily modified IAW the factors of METT-T. The use of plays permitted operation orders to be published quickly. They also promoted continuous operations because soldiers knew their job and were able to execute in the absence of direct supervision.

The plays are not an end-all. As a task force commander said,

"[Plays] are not a substitute for intelligence preparation of the battlefield (IPB) or METT-T. The goal of the plays is to promote teamwork. Teamwork breeds discipline; it is key to the success of the Army on the battlefield."

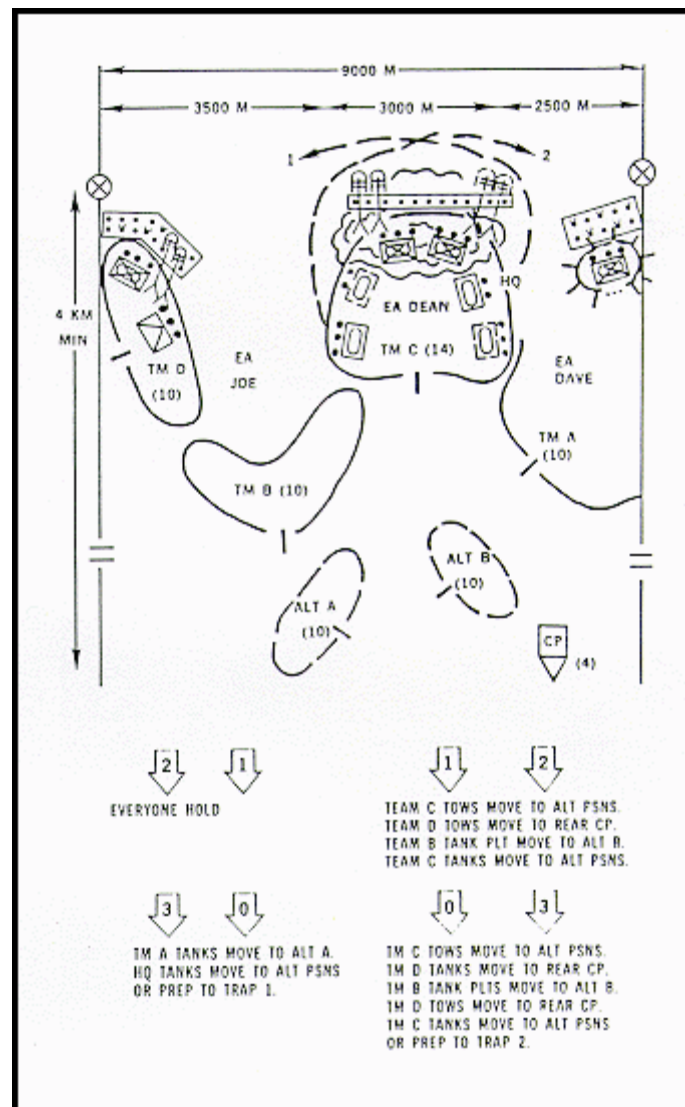
Other units have unsuccessfully used plays without considering these factors. Plays are similar to drills but are not the same. They incorporate many of the automatic responses of drills but integrate combat support and combat service support players. For example, when a play is chosen, the FSO, mortar platoon leader, S4, and medical platoon leader all know how they are going to support the plan. Therefore, it is easier to modify a play according to the factors of METT-T.

Four principles were used in designing the plays:

- ◆ Win the recon/counterecon war
- ◆ Hit the flank
- ◆ Mass
- ◆ Depth

This article presented the more significant command and control techniques used by this unit. Their key to success was strong leadership, teamwork, and the flexibility to react to the dynamics of the battlefield. CALL has produced a videotape, "Teamwork and Flexibility, an NTC and Training Success Story," that further discusses this topic.

This is an example of a wide sector defense play. The IPB process anticipated the TF defending against three motorized rifle companies that had two avenues of approach into the sector. The play is called by the task force command or S3 by a net call stating two numbers. If the enemy had two companies on the west/left avenue and one company on the east/right avenue, the commander called 1,2. Everyone held and fought from their primary position.



(Editor's Note: The Center for Army Lessons Learned (CALL) does not promote the plays or play books as the ultimate solution. CALL promotes repetitive crew drill, leader training using terrain models, and field rehearsals of unit battle plans. This type of training builds teams, unit flexibility on the battlefield, and increases the unit's probability of success in combat.)

Platoon Leadership

(Memorandum, USACGSC, School of Advanced Military Studies, 9 Mar 86;
TRADOC Pam 525-28, US Army Operational Concept for Leadership)

Technical proficiency ". . . refers to knowing one's job and those of your subordinates. It includes analytical ability and diagnostic skills . . ." Technical proficiency is the most important leadership factor on the battlefield. Analysis of the performance of platoon leaders and platoon sergeants shows that technical proficiency has the greatest correlation to the overall effectiveness of the platoon. Understanding each other's roles in the platoon was also a significant factor in determining platoon success.

Surveys and questionnaires were administered to platoon leaders and platoon sergeants before and after they trained at the NTC. The purpose of this research was to determine what leader development factors contributed the most to success at the platoon level. Platoon leaders and platoon sergeants felt they were most successful when:

- ◆ they understood their respective duties and responsibilities.
- ◆ they shared responsibility for leading the platoon.
- ◆ the platoon leader sought the advice of the platoon sergeant.
- ◆ they kept each other informed about mission preparations.
- ◆ the platoon leader delegated authority to the platoon sergeant, and he had a role in tactical planning and decision making.
- ◆ there was a sense of cooperation and a willingness to share information.
- ◆ the platoon leader was willing to learn from the platoon sergeant.
- ◆ the platoon leader respected the platoon sergeant.
- ◆ the platoon sergeant was willing to be led by the platoon leader.
- ◆ the platoon sergeant respected the platoon leader.

These factors are not a formula for success in working out the right way for the platoon leader and platoon sergeant to interact. They are the result of research and interviews conducted with platoon leaders and platoon sergeants who trained at the NTC. They are a start point for developing a successful and effective leadership team at platoon level. Awareness of these ideas will increase the likelihood of success on the battlefield.

Platoon Leader/Platoon Sergeant Interaction

(FM 22-600-20, Noncommissioned Officers Guide, Mar 80;
TRADOC Pam 525-28, US Army Operational Concept for Leadership)

The Creed of the Noncommissioned Officer states:

"Officers of my unit will have maximum time to accomplish their duties; they will not have to accomplish mine."

Today's noncommissioned officers strive to live up to those standards while performing their duties during unit rotations at the National Training Center. This article focuses on the interaction between the platoon leader and platoon sergeant. Critical elements that impact on this relationship are:

- ◆ planning
- ◆ technical and tactical proficiency
- ◆ platoon leader/platoon sergeant rapport

Planning

The platoon leader and platoon sergeant must discuss current and future requirements and establish priorities based on METT-T. They must consider who will do what, when, where, how, and why.

Platoon leaders and platoon sergeants must willingly share leadership responsibilities during garrison and field training. This division of labor between the platoon leader and platoon sergeant must be understood. For example, the platoon leader is responsible for establishing fields of fire for the platoon, but the platoon sergeant should be given responsibility for ensuring range cards are completed properly. Unequal sharing of tasks is a common mistake made by young leaders during training at the NTC. This is often the cause of conflict and confusion within the platoon. Platoon leaders should bring platoon sergeants into the decision making process early. This allows them to capitalize on the vast experience of the platoon sergeant. It also enables the platoon sergeant to assume control of the platoon if/when that becomes necessary.

Technical and Tactical Proficiency

Platoon leaders expect to be trained by their company commanders and advised by their platoon sergeants. They feel that company commanders give them a better perspective on the tactical aspects of how the company fights, while the platoon sergeant gives them advice and assistance on how the platoons and squads fight.

Platoon Leader/Platoon Sergeant Rapport

Rapport between the platoon leader and the platoon sergeant must be developed early during home station training. Planning is a critical factor in developing that rapport. Some platoon sergeants feel compelled to show the lieutenant how to run the platoon. They do this by having the lieutenant watch them conduct business. The vast majority of platoon leaders do not agree with this approach. They prefer the "help me" rather than "show me" attitude of their platoon sergeants. Young platoon leaders want to learn by running their own platoon and having the platoon sergeant advise them.

Successful platoon leaders and platoon sergeants have shown themselves to be highly competent in their individual duties and responsibilities. They also know each other's job. The two leaders continue to complement each other's strengths and weaknesses. They do this by maintaining a continuous dialogue and open lines of communication. Successful platoon sergeants must:

- ◆ provide assistance to the platoon leaders.
- ◆ exercise initiative in the absence of orders.
- ◆ maintain their own tactical and technical proficiency.

Applying these principles, the platoon sergeant not only adheres to the Creed of the Noncommissioned Officer, but also contributes to the success of the platoon.

Safety at the NTC - The Leadership Challenge

(AR 385-10, The Army Safety Program)

According to NTC safety office records, there were 251 accidents at the National Training Center during the thirteen rotations in FY 86. These accidents involved both NTC units and rotational units, and resulted in:

- ◆ three dead soldiers
- ◆ two permanently disabled soldiers
- ◆ 2,933 lost man days
- ◆ \$804,089 medical aid cost
- ◆ \$401,448 equipment repair cost

The costs exclude salary paid to soldiers while recuperating and benefits paid to survivors.

These are not simply cold statistics. They represent a loss of combat power and an increased burden on all battlefield systems. There is a corresponding degradation in unit morale. Safety is a command responsibility.

Most accidents are preventable. We must keep as many soldiers as we can combat ready. The key to prevention is heightened awareness of accident potential during certain times and at certain locations. Leaders must make safety checks paramount, especially during the more dangerous phases and times of the rotation.

Certain phases of NTC rotations are particularly dangerous. By examining historical accident data, we can anticipate accidents in the future. Figure 1 shows that less than six percent of accidents occur during the five days prior to the beginning of rotational training. Ten percent occur after the completion of training as units prepare to leave. The greatest number of accidents at the NTC occur during days two through six of the force on force engagements.

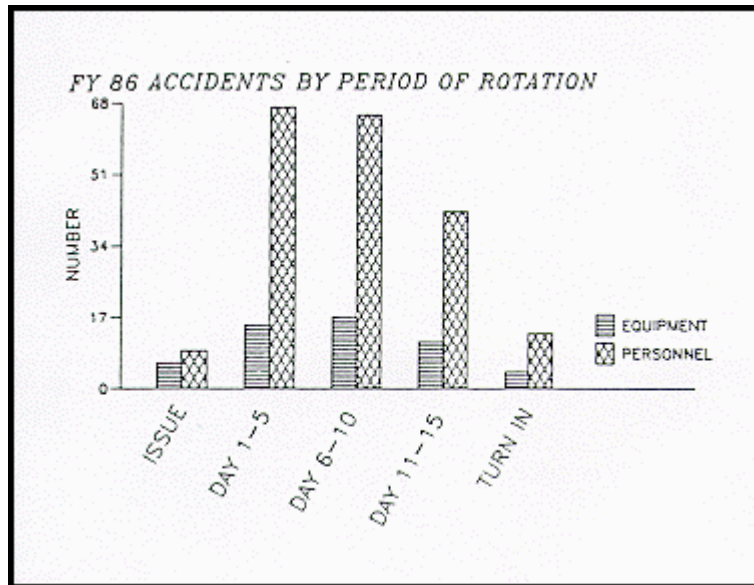


Figure 1

We can also determine what time accidents are most likely to occur. As Figure 2 shows, only 16 percent of accidents occur from 2301 to 0600. Most units are extremely safety conscious during night operations. Sixty-one percent occur from 0601 to 1800, and 23 percent occur from 1801 to 2300. The highest concentration of daylight accidents occur because soldiers ignore known safety hazards, such as soldiers positioning themselves between two vehicles during recovery operations, or excessive speed.

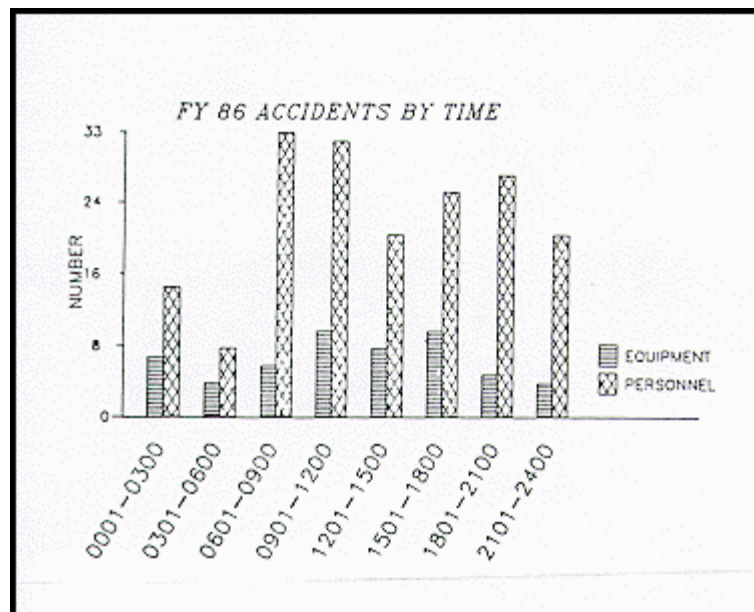


Figure 2

This is one of the challenges of leadership at the NTC: to become involved in safety awareness accident prevention. By educating leaders and properly supervising soldiers, we can reduce the number of accidents, maintain high morale, maintain our combat strength.

MANEUVER

Local Security - A Leader's Challenge

(FM 71-2, Appendix L; FM 22-100, Chapter 2; FM 17-98, Chapter 4; FM 22-9)

Local security for platoon and company teams is an ongoing challenge due to limited assets, competing battlefield tasks, and individual soldier perceptions. Activities such as providing early warning, securing obstacles, perimeter security, manning observation posts/listening posts, and patrolling all compete for any element's manpower. Successful units plan security and execute counter reconnaissance actions. Even so, OPFOR mounted and dismounted patrols continue to penetrate friendly forces. The following lessons provide units an insight into this challenge.

Threat Perception

During training at home station, few units can resource a large OPFOR or keep up the pace of the battle they will encounter at the NTC. Soldiers get used to going through the motions of occupying OPs, but no enemy ever arrives and nothing happens. At the NTC, they have a difficult time changing from this mindset to actively searching for an aggressive, stealthy enemy. Countering this threat perception is difficult but not impossible. It requires constant attention by leaders at all levels.

- ◆ Scouts or dismounted infantry can attempt to penetrate a company team's defense. This reinforces the need for young soldiers and junior NCOs to be alert to the real threats to their positions and obstacles.
- ◆ When moving to or occupying a new position, the soldier misinterprets lulls in the battle as administrative time. This is not the case, as enemy reconnaissance is out in force observing and reporting all activities.
- ◆ Soldiers must challenge and take action when they observe any movement in their area. Soldiers often see enemy vehicles or soldiers but fail to properly report or challenge them. They often fail to take appropriate action when given an incorrect response to the challenge.

Conops

Digging in, laying mines, stretching wire, and filling sandbags are tiring activities under the best of circumstances. When combined with the effects of heat, cold, sustained/fast paced operations, and MOPP, they become even more exhausting. Soldiers and leaders fall asleep and the enemy penetrates the unit.

Sleep Plan

Junior leader initiative must be planted and nurtured if a unit is to beat fatigue. Everyone must sleep sometime, at least four hours daily. Junior leaders and soldiers must be able to make decisions and take action in the absence of more senior leaders. A sleep plan must be established and used if the unit is to maintain a 24 hour capacity.

Aggressive Patrolling

Use small patrols of three to four personnel from the infantry platoon of each company to check obstacles for breaks and cover dead spaces between units. These patrols are usually sufficient to detect the enemy. They should be prepared for possible contact by having a direct and indirect fire plan.

OPs

A minimum of two men should be used for each observation post. One soldier observes the area while the other provides local security, records information, and sends reports to the section leader or platoon leader. Experience has shown that allowing soldiers to sleep while on the OP does not work. A better technique is to have the soldiers on the OP alternate jobs every 20 or 30 minutes because the effectiveness of the observer decreases quickly after that time. OP personnel should rotate out at least every two hours for continuous operations purposes.

Power Down

Establish responsibility for checking security. Make sure the squad/crew leaders understand their security responsibilities. Once this point is understood and reinforced, the junior leadership will take charge and execute the plan well.

OP duty is tedious and requires the constant attention of junior NCOs in combat arms, combat support, and combat service support units. They must be trained and developed so they fully understand the criticality of security and how much the unit's safety depends on them and their soldiers executing that responsibility.

FIRE SUPPORT

Expanding the Role of the FA Battalion XO

(FM 101-5; FM 101-10-1; FM 6-20-15)

The field artillery battalion executive officer must be prepared to assume command of the battalion in battle. The tenets of the AirLand Battle require the rapid transition of command of combat units when the commander becomes a casualty. This fact applies to the field artillery battalion as well as the other combat arms.

Several FA units placed the executive officer at the battalion TOC to facilitate this rapid transition of command. This is a controversial step in the artillery community. Although the initial results have not met with success in every instance, there are a number of aspects inherent in the concept which are worthy of consideration.

The battalion executive officer traditionally performs the function of battalion logistician during tactical operations. In this role the XO may be located in the unit trains to oversee logistical operations. In this location he may not be fully apprised of the current tactical situation if/when called upon to assume command of the battalion.

Under the "second in command" (2IC) concept, the XO is located at the battalion TOC. Here he can routinely supervise all aspects of the battalion staff during the planning and execution of battalion operations. During planning he can orchestrate the staff sections to ensure that staff estimates and recommendations are based on the current IPB.

This consideration is particularly critical during tactical operations requiring the commander and the S3 to be away from the TOC. This may be particularly significant in a DS battalion where the battalion commander performs his role as the brigade FSCOORD. The battalion S3 is also freed under this contingency to physically coordinate with the battery commanders and monitor firing unit operations. In the absence of these decision makers the XO provides the necessary continuity and guidance to facilitate effective battalion staff operations and coordination with the staffs of the Division Artillery and the supported maneuver brigade.

He is in a better position at the TOC to monitor and control the logistical activities of the battalion due to:

- ◆ better communications capability
- ◆ better knowledge of the current tactical situation
- ◆ a closer working relationship with both the battalion and brigade staff
- ◆ more timely information available on the current supply and maintenance status of the firing batteries

MOBILITY/COUNTERMOBILITY/ SURVIVABILITY

Minefield Breaching Methods

(FC 90-13-1, Initial Draft)

Breaching minefields under fire is extremely difficult. Numerous breaching techniques exist, yet each is effective only under limited METT-T conditions. Many units have not trained to breach the standard Soviet minefields. This lack of training may result in high casualties when breaching actual threat minefields. This article describes the Soviet minefield threat, alternate breaching techniques, and the situation under which each technique is most effective.

Soviet Minefield Threat

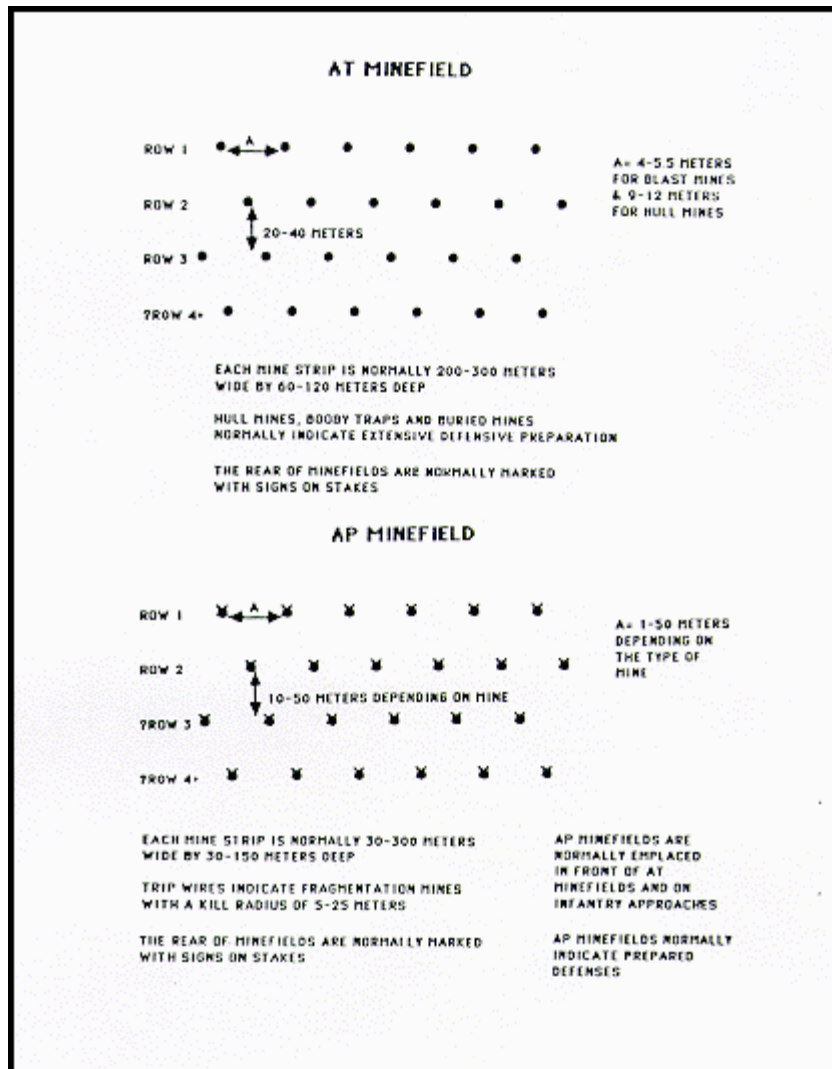
U.S. units will encounter Soviet minefields in all combat operations. Minefields are the primary Soviet obstacle. All Soviet vehicles carry a basic load of mines. Soviet units immediately emplace minefields when the attack fails, even if mine laying troops are under direct observation and fire. During the attack, mobile obstacle detachments emplace minefields on all flank armored avenues of approach.

Each Soviet regiment and division has a mobile obstacle detachment (POZ). Each POZ :

- ◆ can emplace one kilometer of triple row, surface laid, antitank mines in 15 to 30 minutes with their basic load
- ◆ reloads its mine basic load in 30 to 60 minutes
- ◆ is normally with the antitank reserve

The offensive nature of Soviet doctrine and their prolific use of mines mandate rapid emplacement and recovery of minefields. The typical Soviet minefield consists of surface laid, blast (not tilt rod) antitank mines. Buried mines, killer mines (e.g., tilt rods), antihandling devices, and antipersonnel mines normally indicate extensive defensive preparation.

(See Figure 1)



Typical Soviet Minefields
Figure 1

Unlike NATO, the Soviets lay mines in 200-300 meter wide strips with a low density (.5 mines per meter). Note that a Soviet minefield is normally 60 meters deep, but may be up to 300 meters deep. This should be compared to minefields on many U.S. exercises, which normally are 15 to 30 meters deep and has at least one mine per meter. Soviet minefield strips:

- ◆ facilitate counterattacks through numerous gaps
- ◆ maximize the depth of the obstacle system
- ◆ allow siting only where direct fires are most effective

Alternate Breaching Techniques

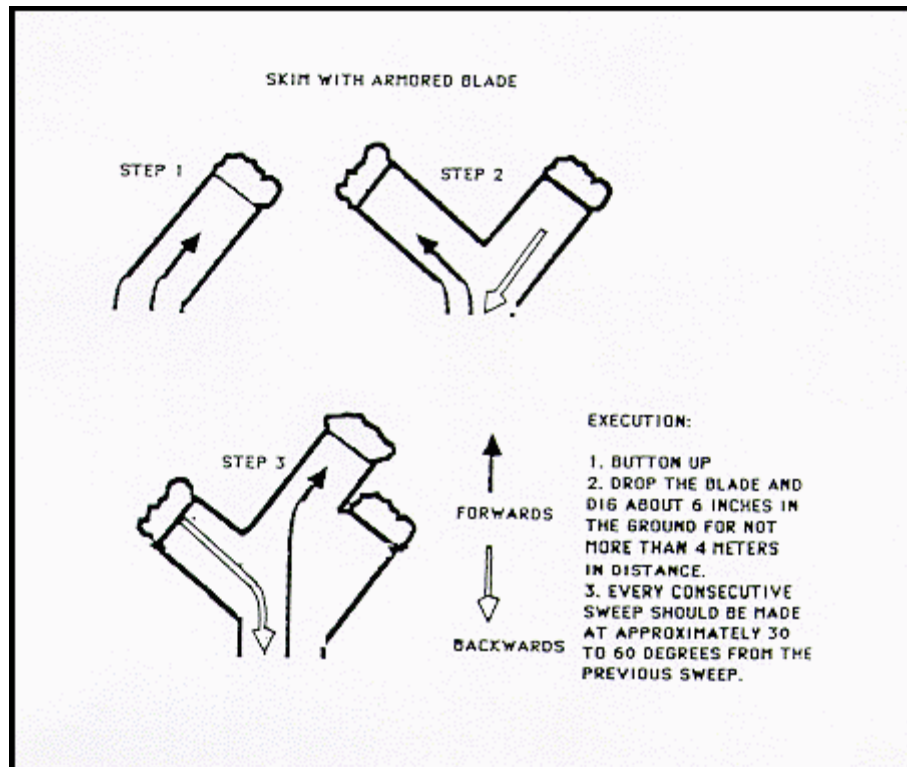
There are currently six possible breaching techniques available to the maneuver task force. These breaching techniques are listed in Figure 2. Only the most critical situational characteristics required to employ each method are described. Any method employed must be well drilled to understand all its technical limitations. Also note that mine plows/rollers are not mentioned as methods, since very few units have these.

| Method in Priority of Effectiveness | Exposure to fire | Mine Casualties | Situation to Employ Procedure |
|---|-------------------------|---------------------------|--|
| 1. Explosive line charge | Limited | Negligible | Four line charges required per task force (limited line charges are currently available in the Army) |
| 2. Skim with Armored Blade (CEV, Tank Dozer, ACE) | High | Negligible | Surface laid AT minefield only; enemy AT fires ineffective |
| 3. Grapple to clear trip wires; hand placed explosives | High | Negligible | Enemy fires neutralized, engineers forward |
| 4. Grapple to clear trip wires and antihandling devices | High | Negligible | Enemy fires neutralized |
| 5. Hand place explosives, don't grapple to clear tripwires | Limited | Potential mine casualties | Surface laid AT minefield only, enemy fire effective |
| 6. Hand lift mines without clearing tripwires or antihandling devices with grapples | Limited | Potential mine casualties | Surface laid AT minefield only; enemy fire effective |

Alternate Breaching Techniques
Figure 2

There are a number of additional considerations inherent in these breaching methods. Method one, explosive line charges, is the preferred breaching method. TC 5-101, pp 2-18 to 23, describes employment of the M173 line charge. Limited numbers of these older charges (M173) are available until the M58A1 mine clearing line charge (MICLIC) is fully fielded.

Method two, skimming, must be done as shown in Figure 3. If this technique is not used, the blade will ride over the spoil and the mines after five to ten meters of skimming.



Skimming Technique
Figure 3

Using method three, engineers detect surface laid mines visually and buried mines with mine detectors. Grapnels clear tripwires. Mines are destroyed with hand-placed explosives.

In method four, infantry detect surface laid mines visually and buried mines by probing. First, grapnels clear tripwires, then they lift the mines to clear antihandling devices. Normal mines are then removed by hand. Scatterable mines must be destroyed in place or pulled by rope out of the minefield.

Method five is the same as method three, except grapnels are not used to clear trip wires.

Method six is the same as method four, except grapnels are not used to clear trip wires or antihandling devices.

Methods five and six are extremely dangerous. Due to potential abuses of these options, USAES does not support them as viable options. Mine casualties will occur if:

- ◆ the minefield reconnaissance is inaccurate
- ◆ the threat doesn't employ their doctrine
- ◆ units habitually use methods five and six

Employ methods five or six only if:

- ◆ Methods one through four failed due to enemy fire inflicting heavy casualties on the breaching force
- ◆ Speed and continuing the attack are paramount to task force success
- ◆ Soldiers breaching fully understand the risk they are taking

Planning/Controlling Engineer Class IV/V

(FM 5-100, Chap 5, FC 5-71-2)

The uncertainty regarding requirements is a major problem with engineer Class IV/V. Current planning factors are outdated. They provide only a minimal guide to the type and quantity of supplies needed.

Most units are unaware of how many U-shaped pickets, concertina rolls, or mines are required to build an obstacle of given size and type. The task force often requests an apparently adequate amount of material for its obstacle plans only to find it is inadequate once the project has begun. The task force wastes assets making additional resupply runs to the field trains, Class IV yard, or ASP.

The engineer officer is responsible for providing an engineer estimate to the commander/S3. It provides Class IV/V requirements, time and manpower estimates, and the recommended obstacle prioritization. Unfortunately, the engineer platoon leader is often inexperienced in developing an estimate. His lack of experience prevents accurate determination of Class IV/V requirements.

Another problem involves the control of engineer assets and Class IV/V. Most brigades consider barrier material an engineer asset and allocate it to the engineer company. The engineer company is often tasked with internal distribution of Class IV/V barrier materials throughout the task force sector resulting in:

- ◆ reduced engineer capability to support the task force.
- ◆ the commander, S3, and S4 losing control of Class IV/V barrier material

An additional consideration is the determination of a Class IV/V engineer load for the task force. Mission loads should be with the S4 prior to movement. The task force should routinely request the FSB to move significant amounts of its engineer Class IV/V material forward. This arrangement requires a task force representative to be at the drop-off point to control receipt from the FSB and subsequent issue to the task force. Control at the forward supply/drop-off point is essential to successful Class IV/V barrier material management.

The obvious remedies from the CSS standpoint are preparation, coordination, and knowledge of engineer and Class IV/V requirements. The task force engineer should prepare a database outlining the materials required for common obstacle missions. It should indicate, for example, how much Class IV is required for 100m of triple-strand concertina barrier.

Coordination is the natural complement to this preparation. S4s can determine requirements based on the commander's concept and warning order. By knowing the number and type of fighting positions and obstacles required, the engineer can compute task force requirements, allocate resources to the companies, and determine additional resources needed to execute the plan. The S3, S4, and engineer must work together to quickly and accurately determine the task force engineer's Class IV/V requirements.

AirLand Battle doctrine is moving toward explicit delineation of the engineer/task force relationship. The July 1986 coordinating draft of FC 5-71-2 says that engineers in the tank and mechanized infantry task force are ". . . always responsible for providing the engineer materials necessary to support the engineer operations in its sector for both offensive and defensive missions. Even though the engineer determines requirements and uses the materials, supplying it remains a task force responsibility regardless of command and support relationships." (Page 3-9; see also FM 5-100, page 5-7)

AIR DEFENSE

The Successful Vulcan Platoon Leader

(FM 44-1; FM 44-16)

The Vulcan platoon leader faces a demanding task when conducting tactical operations. In addition to his duties as a platoon leader, he also serves as a special staff officer on all air defense matters to the task force commander. He is the expert on all air defense related matters within the task force sector.

He must understand maneuver operational concepts and terms as they relate to the overall task force plan. By understanding the concept of the operation and the commander's intent, the Vulcan platoon leader can properly deploy his air defense weapon systems in support of the TF overall plan. He will also understand the necessary actions his element must perform to accomplish objectives, even in the absence of orders. The successful Vulcan platoon leader must:

- ◆ Ensure all of his personnel understand the commander's intent and scheme of maneuver.
 - ◆ Properly employ the weapon systems under his control.
 - ◆ Be knowledgeable of the threat air defense capability and status.
 - ◆ Establish central early warning of incoming enemy air at the TF TOC for other air defense systems, maneuver systems, and the scouts.
 - ◆ Be tactically proficient and knowledgeable of maneuver tactics, formations, terms, and graphics
- .

COMBAT SERVICE SUPPORT

Logistics -- Planning and Leading

(FM 71-2J, Section 8)

The ability to efficiently resupply the task force in extended operations is just as critical to mission accomplishment as tactical planning. Here are two training tenets that have been used to improve task force logistical operations:

- ◆ Combined Arms Logistic Packages (LOGPACs), wargamed and verified at home station
- ◆ NCOs responsible for LOGPAC operations

Battalion logisticians should wargame their daily resupply rates prior to deployment. The historical standard usage rates found in FM 101-10-1 should be updated and adjusted based on the recent experiences of the deploying unit and other units with similar equipment. This data can then be used to tailor a standardized LOGPAC load which contains all of the varied munitions, from 120mm to .45 cal., necessary for combat operations in a combined arms task force. The wargaming sessions should consider the specialized needs of both organic and attached units such as mortars and anti-tank platoons. DS units, such as Stingers and Vulcans, should also be considered.

To minimize these problems, some units used combined arms training periods to determine task force logistical requirements. For example, one S-4 determined the quantity of Class V, by type, that a company team would use on a daily basis for offense and defense. All ammunition types normally used by that unit were then weighed and measured in their crates. The haul capabilities and interior dimensions of the support platoon trucks and trailers were researched and measured.

Using the S-4's daily resupply rate as a goal, the support platoon leader mixed and matched ammunition crates with trucks and trailers until he determined the optimum load. Realizing that trucks might be deadlined or destroyed, he worked out load lists for alternate vehicle types. This provided contingency planning so his NCOs knew that if a HEMMT was down, they could still make the mission by substituting a given number of 5-ton or 2 1/2-ton trucks. Packages were worked out for individual and special platoons, such as scout and Vulcan.

Each package was then verified by an actual upload at the ASP. The load plan was carefully diagrammed and recorded. Copies went to the driver, truck master, and ammo NCO. Load lists reflecting the various task organizations and special platoons were provided to the S-3 and commanders, so they could anticipate their daily resupply and make line item changes in a timely fashion. An abbreviated example appears below:

| Type Ammo | Qty | Cases Req | Tot Cubic Feet/Veh | Tot Cubic Ft/Trlr | Tot Wt Lbs/Veh | Tot Wt Lbs/Trlr | Remarks |
|------------|------|-----------|--------------------|-------------------|----------------|-----------------|--------------|
| 105mm HEAT | 66 | 33 | 100.836 | 0 | 4356 | 0 | Front Center |
| TOW | 8 | 8 | 35.444 | 0 | 640 | 0 | Middle Left |
| .50 Cal | 2550 | 15 | 0 | 13.604 | 0 | 1050 | Rear Right |

Class I Sample Load List
Figure 1

CSS NCOs were able to accomplish their upload procedures in the absence of additional guidance. As soon as trucks arrived at the field trains, support personnel could begin preparing the LOGPAC for another run. This automatic reaction gave both the ammo NCO and truckmaster time to verify load plans and make corrections or additions prior to departure. This created a sense of pride in the NCOs, as they knew the mission and were given the time and responsibility to accomplish it.

By forcing responsibility downward to NCOs, the support platoon leader had additional time to coordinate with the ALC and stay abreast of the tactical situation. This delegation enhanced continuous operations.

The S-4 became proactive because he knew ahead of time what classes and quantities would be delivered. When ammunition shortages or a mistake in delivery occurred, it was a problem, not a crisis. The S-4 was able to devote his energies to planning and advising the commander instead of reacting to crises.

These techniques require training at home station. However, the potential benefits include a reduction in time and confusion and improved forward support. Both of these can save lives for a unit deploying into combat.

Fuel Consumption Data Update

Many units and agencies have requested standard or historical usage data figures from the NTC. The following data is provided to give units some estimates for fuel expenditure at the NTC. Class III is based on estimated operations time and 10 kph movements. Average movement per day at the NTC is 30 km, and average idle time per vehicle is approximately 6 hours (estimate only).

A. M60A3

$$(30\text{km}) \times (1.92\text{gpk}) + (6\text{hr}) \times (2.8\text{gph}) = \\ 74.4 \text{ gal/vehicle/day}$$

B. M113A2

$$(30\text{km}) \times (.625\text{gpk}) + (6\text{hr}) \times (.64\text{gph}) = \\ 22.6 \text{ gal/vehicle/day}$$

C. M1

$$(30\text{km}) \times (5\text{gpk}) + (6\text{hr}) \times (10\text{gph}) = \\ 210 \text{ gal/vehicle/day}$$

D. M2

$$(30\text{km}) \times (1.3\text{gpk}) + (6\text{hr}) \times (1\text{gph}) = \\ 45 \text{ gal/vehicle/day}$$

Editor's Note: These figures are not based on a sufficient number of samples to be declared statistically valid. They are provided merely as a guide to unit logistics planners.

Jump Aid Station

(Memorandum thru Commander, Operations Group, 23 June 1986; TRADOC Pam 525-50)

A successful technique used at the NTC establishes a jump aid station forward of the combat trains, but to the rear of the task force. It moves along the MSR, approximately one to four kilometers behind the trail/reserve company. Doctrinally, the aid station should always be established on or very near the task force MSR. The main aid station remains at the combat trains, continuing to provide medical support but prepared to move when the jump aid station has been established. FM 71-2J refers to this technique in general terms, but it has been further refined at the NTC.

An M577 and an M113 should be used as the jump aid station. This method provides the vehicles for establishing a fully operational treatment station, and enables them to provide additional casualty evacuation assistance. The senior enlisted medic and a driver should accompany the task force surgeon or physician's assistant.

In an offensive mission or during movement to contact, the jump aid station must be prepared to move into a covered and concealed location quickly. The senior enlisted medic should constantly scan the terrain for possible jump locations. When the task force begins taking casualties, the jump aid station immediately halts and prepares to receive them. The aid station located with the combat trains moves in conjunction with the combat trains.

During defensive missions, the requirement for the jump aid station anticipates lateral displacement. Lateral displacement is effective because it provides flexibility; i.e., the aid station is able to move out of the way of an oncoming enemy attack. The aid station in the sector that receives the main attack can displace to avoid contact with the enemy, while the other M577 remains forward and sets up. This technique enables the aid stations to continue to provide medical support to the task force at a time when they may need it the most.